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10/018,584	02/04/2002	Mika Raitola	870A.0003.U1(US)	8338

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EXAMINER	
MAIS, MARK A	
ART UNIT	**PAPER NUMBER**
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/018,584	Applicant(s) RAITOLA, MIKA
	Examiner Mark A. Mais	Art Unit 2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 02 April 2007.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-4,7-13,16-21,24-26,29-31,34-36,39-41,44-46 and 49-51 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-4, 7-13, 16-21, 24-26, 29-31, 34-36, 39-41, 44-46, and 49-51 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 2, 2007 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4, 7-13, 16-21, 24-26, 29-31, 34-36, 39-41, 44-46, and 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitagawa et al. (USP 6,603,980).

4. With regard to claim 1-4, Kitagawa et al. discloses a method comprising:

controlling a power used for transmitting data between a terminal device and a transceiver device of a communication system **[See Abstract]**,

monitoring *during each of predetermined time units* **[Figs. 9 and 10; monitoring is accomplished over a time period (the frames are interpreted as spanning timeslots, col. 4, lines 1-2) whether in regular mode or compressed mode, col. 7, line 58 to col. 8, line 1; accomplished by determining section 110, col. 4, lines 15-23]** the power used in a transmission between said terminal device and said transceiver device **[Fig. 2, col. 4, lines 8-12]**,

requesting an increase or a decrease of the power used in the transmission by using a specific information element for each of the predetermined time unit*s* **[Fig. 2, TPC bit generating section 109, col. 4, lines 12-14]**, *the specific information element having either a positive value [+1] for increasing power or a negative value [-1] for decreasing power;*

storing, *during* a predetermined *period comprising* a plurality of subsequent time units, *a plurality of specific information elements* **[Fig. 2, Accumulating section 113, col. 4, lines 24-33]. It is inherent that the memory is finite and that these values (the multiple TPC bits used, for example, during one period of time) are stored only for a finite period of time]**,

calculating a power raise **[TPC bit value of either 0 or 1, col. 4, lines 18-20]** requested for the power used in the transmission by summing *stored values of the plurality of* specific information elements **[Fig. 2, Determining section 110 calculates the increase/decrease power TPC bit and the amplitude of the TPC bit in the reception signal, col. 4, lines 15-23; the values are summed over a period of time for predicting required transmit power (col. 12, lines 14-27); for example, Kitagawa et al. could be interpreted as saving the last two TPC bits (both 0) and calculate and still send the current power raise TPC bit (0); at the very**

least, it must save 2 TPC bits: for example, when the power levels are too high, Kitagawa et al. could use 1 cycle of TPC bits (i.e., 1 TPC bit) to decrease power by a transmitted TPC value of 0. Then, when the power was at the correct level, it would send a TPC value of 0 [negative value], but decrease the amplitude of the TPC bit [i.e., maintain current power level], thereby causing a *relative* increase in transmitted power], and

calculating an average received power of transmission during *the predetermined period comprising* the plurality of subsequent time units by using *the* stored values of the specific information elements **[Examiner interprets the average power as that calculated over a period of time (i.e., a predetermined period), for example, col. 10, lines 36-50; col. 12, lines 39-44]** *;*

determining whether *or not* the calculated power raise is greater than a sum of the calculated average power of transmission and a predetermined level **[the increase/decrease power TPC bit value is multiplied by the correction value, col. 4, lines 50-59; an offset value is added to the transmit power value, col. 11, lines 51-55; *See Also*, col. 12, lines 14-27 for an explanation as to how the combined values are used to used to determine/decide what the value is]**; *and*

if the determination is positive, inhibiting an increase of the power used in the transmission even if an increase is requested, and

if the determination is negative, allowing an increase of the power used in the transmission when an increase is requested **[TPC generating section determines what value TPC bit inhibits/allows (interpreted as increase/decrease) the transmit power TPC bit value, col. 5, lines 37-42; col. 6, lines 35-42]**.

With regard to claims 1-4, Kitagawa et al. does not specifically disclose that the value of each one of said specific information elements (TPC) used in each predetermined time unit is either negative [i.e., -1] indicating a request for a decrease of power or positive [i.e., +1] indicating a request for an increase of power. However, as noted above, Kitagawa et al uses a binary format and asserts a value on the TPC bits as either a 1 or 0. Using different binary formats are well known to those of ordinary skill in the art. Moreover, Applicant has not indicated that using a non-return to zero format solves any stated problem or is for any particular purpose. It appears that the performance of the power control would result equally well with the non-return to zero format [+1, -1] as with the return to zero format [1, 0]. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kitagawa et al. to use the same non-return to zero format [+1, -1] for indicating and implementing power control changes because such modifications are considered mere design choice modification which fails to patentably distinguish over the prior art of Kitagawa et al. In addition, changing the power control format from return to zero format [1, 0] to non-return to zero format [+1, -1] is interpreted as an optimum value for a known process. A discovery of an optimum value for a known process is obvious engineering. *See* In re Aller, 105 USPQ 233 (CCPA 1955).

5. With regard to claim 10-13, Kitagawa et al. discloses a device comprising:

controlling means for controlling a power used for transmitting data between a terminal device and a transceiver device of a communication system **[See Abstract]**

monitoring means for monitoring during *each of* predetermined time units **[Figs. 9 and 10; monitoring is accomplished over a time period (the frames are interpreted as spanning timeslots, col. 4, lines 1-2) whether in regular mode or compressed mode, col. 7, line 58 to col. 8, line 1; accomplished by determining section 110, col. 4, lines 15-23]** the power used in a transmission between said terminal device and said transceiver device **[Fig. 2, col. 4, lines 8-12]**,

requesting means for requesting an increase or a decrease of the power used in the transmission by using a specific information element for each of the predetermined time units, *the specific information element having either a positive value for increasing power or a negative value for decreasing power;* **[Fig. 2, TPC bit generating section 109, col. 4, lines 12-14]**,

storing means for storing, *during* a predetermined *period comprising a plurality of subsequent time units, a plurality of the* values of the specific information elements **[Fig. 2, Accumulating section 113, col. 4, lines 24-33]. It is inherent that the memory is finite and that these values (the multiple TPC bits used, for example, during one period of time) are stored only for a finite period of time]**,

calculating means for calculating a power raise **[TPC bit value of either 0 or 1, col. 4, lines 18-20]** requested for the power used in the transmission by summing the *stored values of the plurality* of the specific information elements **[Fig. 2, Determining section 110 calculates the increase/decrease power TPC bit and the amplitude of the TPC bit in the reception signal, col. 4, lines 15-23; the values are summed over a period of time for predicting required transmit power (col. 12, lines 14-27); for example, Kitagawa et al. could be**

interpreted as saving the last two TPC bits (both 0) and calculate and still send the current power raise TPC bit (0); at the very least, it must save 2 TPC bits: for example, when the power levels are too high, Kitagawa et al. could use 1 cycle of TPC bits (i.e., 1 TPC bit) to decrease power by a transmitted TPC value of 0. Then, when the power was at the correct level, it would send a TPC value of 0 [negative value], but decrease the amplitude of the TPC bit [i.e., maintain current power level], thereby causing a *relative* increase in transmitted power],

calculating means for calculating an average received power of transmission during the *predetermined period comprising the* plurality of subsequent time units by using stored values of the specific information elements **[Examiner interprets the average power as that calculated over a period of time (i.e., a predetermined period), for example, col. 10, lines 36-50; col. 12, lines 39-44]**;

determining means for determining whether the calculated power raise is greater than a sum of the calculated average power of transmission and a predetermined level **[the increase/decrease power TPC bit value is multiplied by the correction value, col. 4, lines 50-59; an offset value is added to the transmit power value, col. 11, lines 51-55; *See Also*, col. 12, lines 14-27 for an explanation as to how the combined values are used to used to determine/decide what the value is]**;

an output means for outputting a signal configured to one of: inhibit an increase of the power used in the transmission even if the increase is requested if the determination is positive; and allow an increase of the power used in the transmission when the increase is requested if the determination is negative **[TPC generating section determines what value TPC bit**

inhibits/allows (interpreted as increase/decrease) the transmit power TPC bit value, col. 5, lines 37-42; col. 6, lines 35-42].

With regard to claims 10-13, Kitagawa et al. does not specifically disclose that the value of each one of said specific information elements (TPC) used in each predetermined time unit is either negative [i.e., -1] indicating a request for a decrease of power or positive [+1] indicating a request for an increase of power. However, as noted above, Kitagawa et al uses a binary format and asserts a value on the TPC bits as either a 1 or 0. Using different binary formats are well known to those of ordinary skill in the art. Moreover, Applicant has not indicated that using a non-return to zero format solves any stated problem or is for any particular purpose. It appears that the performance of the power control would result equally well with the non-return to zero format [+1, -1] as with the return to zero format [1, 0]. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kitagawa et al. to use the same non-return to zero format [+1, -1] for indicating and implementing power control changes because such modifications are considered mere design choice modification which fails to patentably distinguish over the prior art of Kitagawa et al. In addition, changing the power control format from return to zero format [1, 0] to non-return to zero format [+1, -1] is interpreted as an optimum value for a known process. A discovery of an optimum value for a known process is obvious engineering. *See* In re Aller, 105 USPQ 233 (CCPA 1955).

6. With regard to claims 49-51, Kitagawa et al. discloses a base station, terminal device **[col. 13, lines 52-54, interpreted as being performed by either]** and computer processor/element executing a computer program code stored on a computer readable medium comprising:

a control unit for controlling a power used for transmitting data between a terminal device of a communication system **[See Abstract]**;

a monitoring unit for monitoring the power used in a transmission between said terminal device and said transceiver device **[Fig. 2, col. 4, lines 8-12]** during each of predetermined time units **[Figs. 9 and 10; monitoring is accomplished over a time period (the frames are interpreted as spanning timeslots, col. 4, lines 1-2) whether in regular mode or compressed mode, col. 7, line 58 to col. 8, line 1; accomplished by determining section 110, col. 4, lines 15-23]**;

a request unit for requesting an increase or a decrease of the power used in the transmission by using a specific information element for each of the predetermined time units, *the specific information element having either a positive value for increasing power or a negative value for decreasing power;* **[Fig. 2, TPC bit generating section 109, col. 4, lines 12-14]**;

a storage unit for storing, *during* a predetermined *period comprising a plurality of subsequent time units, a plurality of the* values of the specific information elements **[Fig. 2, Accumulating section 113, col. 4, lines 24-33]. It is inherent that the memory is finite and that these values (the multiple TPC bits used, for example, during one period of time) are stored only for a finite period of time]**;

a first calculating unit for calculating a power raise **[TPC bit value of either 0 or 1, col. 4, lines 18-20]** requested for the power used in the transmission by summing *the stored values of the plurality* of the specific information elements **[Fig. 2, Determining section 110 calculates the increase/decrease power TPC bit and the amplitude of the TPC bit in the reception signal, col. 4, lines 15-23; the values are summed over a period of time for predicting required transmit power (col. 12, lines 14-27); for example, Kitagawa et al. could be interpreted as saving the last two TPC bits (both 0) and calculate and still send the current power raise TPC bit (0); at the very least, it must save 2 TPC bits: for example, when the power levels are too high, Kitagawa et al. could use 1 cycle of TPC bits (i.e., 1 TPC bit) to decrease power by a transmitted TPC value of 0. Then, when the power was at the correct level, it would send a TPC value of 0 [negative value], but decrease the amplitude of the TPC bit [i.e., maintain current power level], thereby causing a *relative* increase in transmitted power]**;

a second calculating unit for calculating an average received power of transmission during *the predetermined period comprising* the plurality of subsequent time units by using stored values of the specific information elements **[Examiner interprets the average power as that calculated over a period of time (i.e., a predetermined period), for example, col. 10, lines 36-50; col. 12, lines 39-44]**;

a determining unit for determining whether the calculated power raise is greater than a sum of the calculated average power of transmission and a predetermined level **[the increase/decrease power TPC bit value is multiplied by the correction value, col. 4, lines 50-59; an offset value is added to the transmit power value, col. 11, lines 51-55; *See***

***Also*, col. 12, lines 14-27 for an explanation as to how the combined values are used to used to determine/decide what the value is]**; and

an output unit for outputting a signal configured to one of inhibit an increase of the power used in the transmission even if an increase is requested if the determination is positive and allow an increase of the power used in the transmission when the increase is requested if the determination is negative **[TPC generating section determines what value TPC bit inhibits/allows (interpreted as increase/decrease) the transmit power TPC bit value, col. 5, lines 37-42; col. 6, lines 35-42]**.

With regard to claims 49-51, Kitagawa et al. does not specifically disclose that the value of each one of said specific information elements (TPC) used in each predetermined time unit is either negative [i.e., -1] indicating a request for a decrease of power or positive [+1] indicating a request for an increase of power. However, as noted above, Kitagawa et al uses a binary format and asserts a value on the TPC bits as either a 1 or 0. Using different binary formats are well known to those of ordinary skill in the art. Moreover, Applicant has not indicated that using a non-return to zero format solves any stated problem or is for any particular purpose. It appears that the performance of the power control would result equally well with the non-return to zero format [+1, -1] as with the return to zero format [1, 0]. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kitagawa et al. to use the same non-return to zero format [+1, -1] for indicating and implementing power control changes because such modifications are considered mere design choice modification which fails to patentably distinguish over the prior art of Kitagawa et al. In addition, changing the power

control format from return to zero format [1, 0] to non-return to zero format [+1, -1] is interpreted as an optimum value for a known process. A discovery of an optimum value for a known process is obvious engineering. *See* In re Aller, 105 USPQ 233 (CCPA 1955).

7. With regard to claim 7 and 19-21, Kitagawa et al. discloses that the method is performed by at least one of said terminal device and said transceiver *device* **[col. 13, lines 52-54]**.

8. With regard to claims 8-9, 24-26, and 29-31, Kitagawa et al. discloses that the method is performed in downlink/uplink direction **[col. 13, lines 52-54]**.

9. With regard to claim 16 and 34-36, Kitagawa et al. discloses that the method is performed by at least one of said terminal device and said transceiver station **[col. 13, lines 52-54]**.

10. With regard to claims 17-18, 39-41, and 44-46, Kitagawa et al. discloses that the method is performed in downlink/uplink direction **[col. 13, lines 52-54]**.

Response to Arguments

11. Applicant's arguments filed April 2, 2007 have been fully considered but they are not persuasive.

12. With respect to claim 1, Applicants argue that Kitagawa et al. fails to disclose "storing a predetermined number of the values of said specific information elements of a plurality of subsequent time units" **[Applicant's Amendment dated April 2, 2007, page 11, paragraph 5]**. The examiner respectfully disagrees.

13. As noted for the rejection of independent claim 1, Kitagawa et al. discloses storing, during a predetermined period comprising a plurality of subsequent time units, a plurality of the values of the specific information elements **[Fig. 2, Accumulating section 113, col. 4, lines 24-33]**. It is inherent that the memory is finite and that these values (the multiple TPC bits used, for example, during one period of time) are stored only for a finite period of time.

14. Applicants argue that the Kitagawa et al. does not disclose summing stored values **[Applicant's Amendment dated April 2, 2007, page 13, paragraph 2]**. The examiner respectfully agrees.

15. Determining section 110 calculates the increase/decrease power TPC bit and the amplitude of the TPC bit in the reception signal **[Fig. 2, col. 4, lines 15-23]**. The values are summed over a period of time for predicting required transmit power **[col. 12, lines 14-27]**. For example, Kitagawa et al. could be interpreted as saving the last two TPC bits (both 0) and calculate and still send the current power raise TPC bit (0). At the very least, it must save 2 TPC bits: for example, when the power levels are too high, Kitagawa et al. could use 1 cycle of TPC bits (i.e., 1 TPC bit) to decrease power by a transmitted TPC value of 0. Then, when the power was at the

correct level, it would send a TPC value of 0 [negative value], but decrease the amplitude of the TPC bit [i.e., maintain current power level], thereby causing a *relative* increase in transmitted power.

16. Applicants argue that Kitagawa et al. does not use the added TPC bits to offset a large increase (e.g., a stream of +1s) or decrease (e.g., a train of –1s) in power levels **[Applicant's Amendment dated April 2, 2007, page 13, paragraph 3 to page 14, paragraph 1]**. The examiner respectfully agrees.

17. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies [i.e., adding TPC bits to offset a large increase or decrease (e.g., a stream of +1s/-1s) in power levels] are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

(a) Shirai (USP 7,027,810), Method of determining electric field state of mobile station also in view of electric field state of uplink.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Mais whose telephone number is 572-272-3138. The examiner can normally be reached on M-Th 5am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MAM
April 7, 2007

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